

# Chapter 4 - Data Analysis and Discussion (example)

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## 4.1. Reliability Analysis

Before conducting any analysis on the data the reliability of all the data were analyzed on the basis of Cronbach's Alpha value. The reliability analysis was performed on the complete data of the questionnaire. The reliability of the data was found to be (0.922) as shown in the results of the reliability analysis provided below in table 4.1. However the complete results output of the reliability analysis is given in the appendix.

Table 4.1

<i>Reliability Analysis (N=200)</i>	
<b>Cronbach's Alpha</b>	<b>No. of Items</b>
<b>.922</b>	<b>29</b>

The Cronbach's Alpha value which is between (0.7-1.0) is considered to have excellent reliability. The Cronbach's Alpha value of the data was found to be (0.922) therefore this indicated that the questionnaire data had excellent reliability. All of the 29 items of the questionnaire had excellent reliability and if they are taken for further analysis then they are capable of generating results with 92.2% reliability.

## 4.2. Frequency Distribution Analysis

First of all, the frequency distribution analysis was performed on the demographic variables using SPSS to identify the demographic composition of the respondents. The section 1 of the questionnaire had 5 demographic questions to identify; gender, age group, annual income, marital status and education level of the research sample. The results of the frequency

distribution given in table 4.2 below indicated that there were 200 respondents in total, out of which 50% were male and 50% were female. This shows that the research sample was free from gender based biases as male and female had equal representation in the sample.

Moreover the frequency distribution analysis suggested that there were three age groups; ‘20-35’, ‘36-60’ and ‘Above 60’. The 39% of the respondents belonged to ‘20-35’ age group, while 56.5% of the respondents belonged to ‘36-60’ age group and the remaining 4.5% belonged to the age group of ‘Above 60’.

Furthermore the annual income level was divided into four categories. The income values were in GBP. It was found that 13% of the respondents had income ‘up to 30000’, 27% had income between ‘31000 to 50000’, 52.5% had income between ‘51000 to 100000’, and 7.5% had income ‘Above 100000’. This suggests that most of the respondents had annual income between ‘31000 to 50000’ GBP.

In addition the frequency distribution analysis indicated that 61% respondents were single while 39% were married as indicated in table 4.2. This means that most of the respondents were single. Based on frequency distribution it was also found that education level of the respondents were analyzed using four categories of education level, namely; diploma, graduate, master and doctorate. The results depicted that 37% of the respondents were diploma holders, 46% were graduate, 16% had master level education, while only 2% of the respondents had doctorate. This suggests that most of the respondents were either graduate or diploma holders.

Table 4.2

*Frequency Distribution of the Demographic Characteristics of the respondents (N=200)*

Information of Participants	(N=200)
<i>Gender</i>	<i>f(%)</i>
Male	100 (50)
Female	100 (50)
<i>Age group</i>	
20-35	78 (39.0)
36-60	113(56.5)
Above 60	4.5 (9)

<i>Annual income</i>	
Up to 30000	26 (13.0)
31000 to 50000	54 (27.0)
51000 to 100000	105 (52.5)
Above 100000	15 (7.5)
<i>Marital status</i>	
Single	122 (61)
Married	78 (39)
<i>Education level</i>	
Diploma	74 (37.0)
Graduate	92 (46.0)
Master	32 (16.0)
Doctorate	2 (1.0)

### 4.3. Multiple Regression analysis

The hypotheses were tested using linear multiple regression analysis to find out which of the dependent variables had significant positive effect on the customer loyalty of the five star hotel brands. The results of the regression analysis are summarized in the following table 4.3, however the complete SPSS output of the regression analysis is given in appendix.

Table 4.3

*Multiple regression analysis showing the predictive values of dependent variables (Brand image, corporate identity, public relation, perceived quality, and trustworthiness) on customer loyalty (N=200)*

<i>Source</i>	<i>R</i>	<i>R<sup>2</sup></i>	<i>Adjusted R<sup>2</sup></i>	<i>β</i>	<i>Significance</i>	<i>t</i>
Regression (ANOVA)	.948	.899	.897		.000	
Constant				-.382	.005	-2.866
Brand image				.074	.046	2.012
Corporate identity				.020	.482	.704
Public relation				.014	.400	.843
Perceived quality				.991	.000	21.850
Trustworthiness				-.010	.652	-.452

*Predictors: (Constant), Trustworthiness, Public Relation, Brand Image, Corporate Identity, Perceived Quality*

*Dependent Variable: Customer Loyalty*

The significance value (p-value) of ANOVA was found to be (0.000) as shown in the above table, which was less than 0.05. This suggested that the model equation was significantly fitted

on the data. Moreover the adjusted R-Square value was found to be (0.897) which indicated that 89.7% variation in customer loyalty was explained by the predictors in the model.

Furthermore the presence of significant effect of the 5 predicting variables on the customer loyalty was identified based on their sig. values. The effect of a predicting variable is significant if its sig. value is less than 0.05 or if its t-Statistics value is greater than 2. It was found that the variable ‘brand image’ had sig. value (0.046), the variable ‘corporate identity’ had sig. value (0.482), the variable ‘public relation’ had sig. value (0.400), while the variable ‘perceived quality’ had sig. value (0.000), and the variable ‘trustworthiness’ had sig. value (0.652).

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#### 4.4. Hypotheses Assessment

On the basis of the regression analysis it was found that brand image and perceived quality has a significant positive effect on customer loyalty, while corporate identity, public relation and trustworthiness have insignificant effect on customer loyalty. Therefore the two hypotheses; H1 and H4 were accepted, however the three hypotheses; H2, H3 and H5 were rejected as indicated in the table 4.4 given below.

Table 4.4  
Hypothesis Assessment Summary Table (N=200)

Hypotheses	Sig. value	t-Statistics	Empirical conclusion
H1: Brand image has a significant positive effect on customer loyalty.	.046	2.012	Accepted
H2: Corporate identity has a significant positive effect on customer loyalty.	.482	.704	Rejected
H3: Public relation has a significant positive effect on customer loyalty.	.400	.843	Rejected
H4: Perceived quality has a significant positive effect on customer loyalty.	.000	21.850	Accepted
H5: Trustworthiness has a significant positive effect on customer loyalty.	.652	-.452	Rejected

The insignificant variables (corporate identity, public relation and trustworthiness) were excluded from the model equation 1. After excluding the insignificant variables from the model equation 1 the final equation becomes as follows;

$$\text{Customer loyalty} = \alpha + 0.074 (\text{Brand image}) + 0.991 (\text{Perceived quality}) + \epsilon$$

The above equation suggests that 1 unit increase in brand image is likely to result in 0.074 units increase in the customer loyalty, while 1 unit increase in perceived quality can result in 0.991 units increase in customer loyalty.

#### **4.5. Cross Tabulation Analysis**

To further explore the results, the data of the demographic variables were cross tabulated against the responses of the respondents regarding the customer loyalty using SPSS. In this regards the five demographic variables; gender, age group, annual income, marital status and education level were cross tabulated against the five questions regarding customer loyalty to know the difference between the customer loyalty of five star hotels of UK based on demographic differences. The results of the cross tabulation analysis are given in the appendix. The results are graphically presented in bar charts too, which are also given in the appendix.

##### **4.5.1. Cross Tabulation of Gender against Customer Loyalty**

The gender was cross tabulated against question 1 to 5 of the questionnaire to identify the gender different between the responses of male and female respondents regarding customer loyalty of five star hotels of UK. The results indicated that out of 100 males 57% were extremely agreed that they stay at one hotel, while out of 100 females 80% were extremely agreed they stay at one hotel. This shows that in comparison with male, females were more agreed that they stay at one hotel and so they were found to be more loyal towards their respective hotel brands.

The results of cross tabulation further indicated that out of 100 males 53% were extremely agreed that they always say positive things about their respective hotel brand to other people, while out of 100 females 77% were extremely agreed. Based on the results the females were

found to be in more agreement than males that they always say positive things about their respective hotel brand to other people.

It was further found that out of 100 males 53% were extremely agreed that they recommend their hotel brand to others, however out of 100 females 74% were extremely agreed to this statement. This result also suggested that females were more in agreement than males that they recommend their hotel brand to others.

Moreover, it was found that out of 100 males 54% were extremely agreed that they don't seek alternative hotel brands, while out of 100 females 79% were extremely agreed to this statement. This result also suggested that females were more agreed than males that they don't seek alternative hotel brands, and so were found to be more loyal in comparison with males.

Furthermore, it was identified that out of 100 male respondents 56% were extremely agreed that they would continue to go to the same hotel irrespective of the prices, however out of 100 females 79% were extremely agreed. Based on this result it was clear that females were more agreed as compared to males that they would continue to go to the same hotel irrespective of the prices, and so females were found to be more loyal in comparison with males.

After cross tabulating 'gender' against response of the 5 questions regarding customer loyalty the females were found to be more loyal customers of the five star hotel brands than males as they were found to be more in agreement than man that they stay at one hotel, always say positive things about their hotel brand to other people, recommend their hotel brand to others, don't seek alternative hotel brands and would continue to go to the same hotel irrespective of the prices.

#### **4.5.2. Cross Tabulation of Age Group against Customer Loyalty**

Afterwards the second demographic variable, 'age groups' was cross tabulated against question 1 to 5 of the questionnaire to identify the different between the customer loyalty of customers of different age groups. The results indicated that out of 78 respondents who were between 20 to 35 years of age, 61.5% were extremely agreed that they stay at one hotel. While out of 113 respondents who were between 36 to 60 years of age, 72.6% were extremely agreed that they always stay at one hotel. However out of 9 respondents who were above 60 years of age, 77.8% were extremely agreed that they always stay at one hotel. This indicated that customers of 36-60

and above 60 age groups were more loyal to their hotel brands as they were more keen to stay at a respective hotel brand.

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#### **4.5.3. Cross Tabulation of Annual Income against Customer Loyalty**

Then the third demographic variable, 'annual income' was cross tabulated against question 1 to 5 of the questionnaire to identify which of the customers were most loyal based on their respective annual income levels. The results indicated that out of 26 respondents who had annual income up to 30000 GBP, 84.6% were extremely agreed that they always stay at one hotel. However, out of 54 respondents who had annual income from 31000 to 50000 GBP, 98.1% were extremely agreed that they always stay at one hotel. Although out of 105 respondents who had annual income from 50000 to 100000 GBP, 49.5% were extremely agreed that they always stay at one hotel. While out of 10 respondents who had annual income from 50000 to 1000000 GBP, 66.7% were extremely agreed that they always stay at one hotel. This indicated that customers of annual income level from 31000 to 50000 GBP were more loyal to their hotel brands than the customers having other annual income levels.

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#### **4.5.4. Cross Tabulation of Marital Status against Customer Loyalty**

Furthermore the fourth demographic variable the 'marital status' was cross tabulated against question 1 to 5 of the questionnaire to understand the difference between the responses of married and unmarried respondents regarding customer loyalty of five star hotels of UK. The results of the cross tabulation analysis indicated that out of 122 respondents who were single, 59.8% were extremely agreed that they stay at one hotel. However out of 78 married respondents around 82% respondents were extremely agreed that they stay at one hotel. Thus the married customers were

found to be more loyal to their hotel brands than the unmarried customers because in comparison the married customers more prefer to stay at one hotel brand.

To proceed with, the results of cross tabulation it was found that out of 122 single respondents, 55.7% were extremely agreed upon always saying positive things about their hotel brands to other people. On the other hand, out of 78 married respondents, 79.5% were extremely agreed. Hence, upon evaluation of the results, it can be said that married customer have more customer loyalty as they are in more agreement than singles that they always give a positive feedback regarding their respective hotel brand to other people.

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#### **4.5.5. Cross Tabulation of Education Level against Customer Loyalty**

Subsequently the fifth demographic variable, 'education level' was cross tabulated against question 1 to 5 of the questionnaire to identify which of the customers were most loyal based on their respective education levels. The results indicated that out of 50 respondents who were diploma holders, 67.6% were extremely agreed that they always stay at one hotel. While out of 64 respondents who were graduates, 69.6% were extremely agreed that they always stay at one hotel. Although out of 22 respondents who were masters, 68.8% were extremely agreed that they always stay at one hotel. However out of 2 respondents who had doctorates, 50% were extremely agreed to always stay at one hotel. This indicated that customers who were graduates were more loyal than the customers with diplomas, masters or doctorates.

Moreover, 66.2% of the respondents who were diploma holders were extremely agreed that they always say positive things about their hotel brand to other people, while 64.1% of the respondents who were graduates were extremely agreed, however 65.5% of the respondents who had masters were extremely agreed, and 50% of the respondents who had doctorates were extremely agreed with the statement. Based on this result customers having masters were found to be the most loyal customers of their respective five star hotel brands.

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#### **4.6. Discussion**

In this subsection the findings of this study are compared and contrasted with the literature to identify which of the past researches support the findings of the present research. The results of this present study based on regression analysis suggested that brand image can have a significant positive effect on the customer loyalty of five star hotels in the UK. This finding was supported by the research of Heung et al. (1996) who also suggested that brand image of hotel can play a vital role in preserving a high ratio of customers loyalty.

Moreover the results of this present study also suggested that perceived quality was the second factor which was found to have significant positive effect on customer loyalty. The perceived quality was evaluated on the basis of; service quality, comfort, staff courtesy, customer satisfaction and meeting expectations of service quality. In this regards the research of Tat and Raymond (2000) supports the findings of this study, as according to whom the staff service quality were found to have effect on customer loyalty and the level of satisfaction. Teas (1994) had also found service quality to have an effect on customer loyalty. However Teas also found that staff empathy (staff courtesy) towards customers can also have an effect on customer loyalty. The research of Rowley and Dawes (1999) also supports the finding of this present study, as according to them expectations of the users in relation to the quality and nature of the services have an effect on customer loyalty. A study by Oberoi and Hales (1990) was found to be in agreement with the findings of the present study, as they had found quality of staff service to have an effect on customer loyalty.

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#### **4.7. Summary of the Findings**

1. Brand image was found to have a significant positive effect on customer loyalty. Therefore customer loyalty is likely to increase with increase in brand image.
2. Corporate identity was found to have an insignificant effect on customer loyalty. Therefore customer loyalty is not likely to increase with increase in corporate identity.
3. Public relation was found to have an insignificant effect on customer loyalty. Therefore customer loyalty is not likely to increase with increase in public relation.
4. Perceived quality was found to have a significant positive effect on customer loyalty. Therefore customer loyalty is likely to increase with increase in perceived quality.

5. Trustworthiness was found to have an insignificant effect on customer loyalty. Therefore customer loyalty is not likely to increase with increase in trustworthiness.
6. The female customers were found to be more loyal customers of the five star hotel brands than male customers.
7. The customers of age from 36 to 60 years were more loyal to their hotel brands than the customers of age from 20 to 35 and above 60 years.
8. The customers who had annual income from 31000 to 50000 were more loyal customers of their respective hotel brands than the customers who had annual income level less than 31000 or more than 50000.
9. The married respondents had more customer loyalty than unmarried customers, towards five star hotel brands of UK.
10. The customers who had bachelor degrees and the customers who had master degrees were found to be more loyal to the customers who had diploma or doctorate.